## EAST Search History

## EAST Search History (Prior Art)

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
310		29/592,592.1,595,602.1,603.01 cels.	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
311	20563		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
312	4379		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
313	193		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
314	355		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
315	162		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
316	1058		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
317	1		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
318	814		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
319	131	\$312 and (bridge wheatstone) same (grur trur crur)	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; IDERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
320	30	\$319 not \$313		OR	ON	2010/09/24 11:03

321	8292	(spin\$1 valve spin adj valve) and (grin timr crin magneto\$1 resist\$4)	US PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
322	5685	S321 and (pinned fixed) near3 (layer level)		OR	ON	2010/09/24 11:03
23	377	S322 and (bridge wheatstone)		OR	ON	2010/09/24 11:03
324	126	S322 and ((°2° two plural\$3 multipl\$3 additional) near3 (bridge wheatstone) dual\$1bridge dual adj bridge dual\$1wheatstone dual adj wheatstone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
	1	324/207.21,252.ccls. 338/32R.ccls.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; UBM_TDB	OR	ON	2010/09/24 11:03
126	444	SS25 and (spinS) valve spin adj valve)	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; JBM_TDB	OR	ON	2010/09/2 11:03
	7	("20030070497"   "20060103381"   "6175296"   "6313627"   "6366079"   "6501678"   "6946834"),PN.	US-PGPUB; USPAT; USOCR	OR	ON	2010/09/24 11:03
328	18	(*6501678"),URPN.	USPAT	OR	ON	2010/09/2 11:03
29	8	("5477482"   "5561368"   "5617071"   "5945825"   "6100686"   "6175296"   "6178111"   "6329818").EN.	US-PGPUB; USPAT; USOCR	OR	ON	2010/09/2 11:03
30	4211	S311 and direction near3 magnetiz\$5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/2 11:03
331	489	S330 and (bridge wheatstone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TIDB	OR	ON	2010/09/2 11:03
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5331 not 5314	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/2 11:03
333	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S311 and ((pinned fixed hard) near3 (layer level direction) direction near3 magnetiz\$5)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/2 11:03
334	3127	5333 and (spinS Ivalve spin adj valve)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03

S335	29484	29/592,592.1,595,602.1,603.01.cels.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
S336	20563	\$335 and (substrate semiconductor wafer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
\$337	6144		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
S339	949	magnetiz\$5) with (cross\$3 perpendicular\$2 orthogonal\$2 normal\$2))	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
\$340	5		US-PGPUB; USPAT; USOCR	OR	ON	2010/09/24 11:03
S341	1422	[\$337 and ((bridge wheatstone) ("2" two second additional plural§3 multipl§3) near5 (gmr tmr magneto§1resist§4 magnetic near3 resist§4 sens§3 detect§3 probe transducer) same ((pinned fixed hard) near3 (layer level direction) direction near3 (magnetic§5) with (cross§3 perpendicular§2 orthogonal§2 normal§2))		OR	ON	2010/09/24 11:03
5342	473	S341 not S339	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	OR	ON	2010/09/24 11:03
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
	15963		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; :IBM_TDB	OR	ON	2010/09/24 11:03
	t t t t t t t t t t t t t t t t t t t		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
S346	502		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
S347	1360		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_IDB	OR	ON	2010/09/24 11:03

348	700		USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2010/09/24 11:03
349	151862	(pinned fixed hard) near3 layer	IBM_TDB  US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2010/09/24 11:03
350	15681	S349 and (gmr tur magneto\$ lresist\$4 magnetic near3 resist\$4)	IBM_TDB US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2010/09/24 11:03
351	11537	S350 and (bridge wheatstone (plural\$4 multipl\$4 several two "2" second additional)) same (gmr tmr magneto\$1resist\$4 magnetic near3 resist\$4)	IBM_TDB US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
352	935	S351 and ("x-axis" x near3 axis) and ("y-axis" y near3 axis)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
353	677		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
354	425		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
355	2893		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
356	934557		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
357	31182	S356 and (gmr tur magneto\$ lresist\$4 magnetic near3 resist\$4)		OR	ON	2010/09/24 11:03
		S357 and ((pinned fixed hard) near3 (layer axis) spin\$Ivalve spin adj valve)		OR	4444	2010/09/24 11:03
359		\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03

360	13580	((pinned fixed hard) near3 (layer axis) spin\$1valve spin adj valve) same (gmr tur magneto\$1resist\$4 magnetic near3 resist\$4)	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2010/09/24 11:03
			EPO; JPO; DERWENT; IBM_TDB	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
361		\$4)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
362	934557		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
363	31182		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
		S364 and ((plural\$4 multipl\$4 several "4" four fourth) near3 (magnetic near3 resist\$4 gmr tmr spin\$1 valve spin adj valve magneto\$1 resist\$4) (bridge wheatstone) same (gmr tmr spin\$1 valve spin adj valve magneto\$1 resist\$4 magnetic near3 resist\$4))	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR		2010/09/24 11:03
366	722		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
367	308		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
368	644		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
369	1204		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
370			US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
371	98		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03

			.,		,	,
	1	(YOSHIDA near3 SUSUMU).in.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S373	42	(AISO near3 KO KICHI),in.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
\$374	54	(S369-S372) and (gmr tmr magneto\$ Iresist\$4 magnetic near3 resist\$4) same (spin\$1 valve spin adj valve (pinned fixed hard) near3 (layer axis))	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S375	56	(S369 S372) and (gmr tur magneto\$ l resist\$4 magnetic near3 resist\$4) and (spin\$ l valve spin adj valve (pinned fixed hard) near3 (layer axis))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
\$376	1774	\$364 and ((eight '8' eighth) near3 (magnetic near3 resist\$4 gmr tmr spin\$1 valve spin adj valve magneto\$1 resist\$4) (bridge wheatstone) same (gmr tmr spin\$1 valve spin adj valve magneto\$1 resist\$4 magnetic near3 resist\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
\$377	439	\$376 not \$365	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S378	2029	\$360 and ((eight *8° eighth) near3 (magnetic near3 resist\$4 gmr tuu spin\$1 valve spin adj valve magneto\$1 resist\$4) (bridge wheatstone) same (gmr tuu spin\$1 valve spin adj valve magneto\$1 resist\$4 magnetic near3 resist\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S379	385	\$378 not \$377 not \$365	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S380	81	\$379 not \$366	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S381	447	324/247.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03
S382	46	324/247,252 ccls. and ((pinned hard fixed) near3 (layer axis) and (gmr tmr magneto\$ lresis/s\$4 magnetic near3 resis/s\$4).clm.	US-PGPUB	OR		2010/09/24 11:03
S383	5	("20020006017"   "5315282"   "5561368"   "5945825"   "6465053").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2010/09/24 11:03
		"324" clas. "338" clas. "360" clas. "438" clas. "29" clas. "365" clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
S385	5697	\$384 and tunnel\$3 near3 magneto\$1resist\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR		2010/09/24 11:03

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S386	610		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
3387	801	tunnel\$3 near3 magneto\$1resis\$4 with ("4" four fourth eight eighth bridge wheatstone plural\$4 multip\$\$4)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
5388	191		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
5389	996	tunnel\$3 near3 (magnetic near3 resisi\$4 magneto\$1resist\$4) with ("4" four fourth eight eighth bridge wheatstone phural\$4 multipl\$4 several additional)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
3390	195		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
391	73	324/247,252 ccls. and ((spin\$) valve spin adj valve (pinned hard fixed) near3 (layer axis) and (gmr magneto\$) resist\$4 magnetic near3 resist\$4)) (tunnel\$3 near3 (magneto\$) resist\$4 magnetic near3 resist\$4) turr)).clm.	US-PGPUB	OR	ON	2010/09/24 11:03
3392	2770		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
3393	1311		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
			US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
3395	18	(*1601678*).URPN.	USPAT	OR	ON	2010/09/24 11:03
396	6	(76313627°),URPN.	USPAT	OR	ON	2010/09/24 11:03
397			US-PGPUB; USPAT; USOCR	OR	ON	2010/09/24 11:03
398	42		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
	29484	29/592,592.1,595,602.1,603.01 acls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
S400	6708	\$399 and ((spin\$) valve spin adj valve spin \$1 dependent\$ itume\$5 spin adj dependent adj tume\$5 turn tume\$5 near3 magneto\$ (resist\$4 tume\$5 near5 magnetic near3 resist\$4 magnetic adj tume\$5 adj junction magnetic\$1 tume\$6 junction} ((pinned fixed hard bias\$3) near3 (layer film axis) and (easy soft free) near3 (layer film axis)))		OR	ON	2010/09/24 11:03

S401	1462	\$1 valve spin adj valve sott spin\$1dependem\$1 tunnel\$5 spin adj dependent adj tunnel\$5 tmr tunnel\$5 near3 magneto\$1 resist\$4 tunnel\$5 near5 magnetic near3 resist\$4 magnetic adj tunnel\$5 adj junction magnetic\$1 tunnel\$6junction))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_IDB	OR	ON	2010/09/24 :11:03
3402	29484	29/592_592_1,595,602_1,603.01 ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
403	6708		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
3404	1	tunnel\$5 adj junction magnetic\$1tunnel\$6junction))	US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 11:03
3405	29484	29/592,1595,602.1,603.01 ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
3406	3		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
3407	2		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
408	78		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 11:03
3409	29484		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 16:33
3411	1035		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; JBM_TDB	OR	ON	2010/09/24 16:34
3412	76		US-PGPUB; USPAT; USOCR; FPRS; EPO; IPO; DERWENT; IBM_TDB	OR	ON	2010/09/24 16:34

## EAST Search History (Interference)

Ref # Hits   Search Query	DBs	Default Operator	Plurals	Time Stamp
[3419 19] [324/247,252 cels, and ((spinSt Valve spin adj valve (pinned hard fixed) near? (layer axis) and (free easy soft) near? (axis layer) and (substrate wafer IC integrated adj circuit) and (bridge wheatstone) and (gmm magnetoSt nessis\$4	US-PGPUB; USPAT; UPAD		ON	2010/09/24 16:35
magnetic near's resist\$4 sdt turr tuunel\$5 mtj)).clm.	8 8	Ì		
\$420 (217 (SATO near3 HIDEKI) in.	US-PGPUB; USPAT; UPAD	Ν .	ON	2010/09/24 16:58
\$421   25   (OOHASHI near3 TOSHIYUKI) in.	US-PGPUB; USPAT; UPAD	OR	ON	2010/09/24 16:58
SM22   47   (WAKUI near3 YUKIO) in.	US-PGPUB; USPAT; UPAD	OR	ON	2010/09/24 16:58

[3423   187 ](YOSHDA near) SUSUMU) in.	US-PGPUB; USPAT; UPAD OR	ON	2010/09/24 16:58
[S424 22 - [(AISO near3 KOKICH]) in.	US-PGPUB; USPAT; UPAD OR	ON	2010/09/24 16:58
S426 383 4(S420 S421 S422 S423 S424) and (gmr magneto\$1resist\$4 magneto near\$ resist\$4 soft tmr tunnel\$5 mtj)	US-PGPUB; USPAT; UPAD OR	ON	2010/09/24 17:00
[S427 116 [S420 S421 S422 S423 S424] and (magnetic near3 (sens\$4 probe transduc\$4 detect\$4))	US-PGPUB; USPAT; UPAD OR	ON	2010/09/24 17:03

9/30/2010 4:07:44 PM H:\East\Workspaces\10821913RCE\_A.wsp